The Value of Calcium in Disorders of Women.

A Reprint from the Medical Press and Circular,
June 3rd, 1925.

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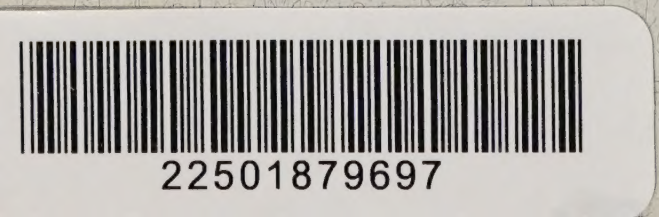

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Dr. Louis Berman, in his book on " The Glands Regulating Personality " (Macmillan Co.), announces some almost startling, though undeniable, truths about lime salts. I quote some of these : " The lime salts, because of their peculiar properties of dissolving or precipitating themselves according to electrical conditions in their medium, have come to occupy a central position in all the processes of growth, metabolism and sex differentiation. So it is that masculinity may be described as a stable, constant state in the organism of lime salts, and the feminine as an unstable, variable state of lime salts. The male skeleton contrasts with the female as the stronger, larger, heavier and straighter, because it is an expression of a greater capacity to utilise, store, and keep lime in the system. Women throughout their reproductive period are liable to rapid and pendulum-like fluctuations of their lime content. Menstruation, pregnancy, lactation, all draw upon the store of lime, sometimes depleting it to the point of softening of the bones and wrecking the whole skeleton." (Loc. cit., p. 142.)

As an addendum to this statement one need only allude to the important conclusions reached by Blair Bell and others to the effect that poverty of calcium in the blood is the root-cause of most cases of dysmenorrhœa, menorrhagia, and other affections of the female genital system. When chloride of calcium was the only mode in which this important element could conveniently be given, Barr used to administer it in the form of a jelly composed of gelatin 1 oz., 2 to 4 drachms of calcium chloride and the juice of one lemon in a pint of hot water. This was, I recollect, one of his favourite prescriptions in cases of splenic anæmia. I have used it in many cases similar to those noted in his paper, but the preparation Kalzana is so much easier to handle and so pleasantly flavoured that my usage of calcium is now almost entirely restricted to it.

In the cases here described this is the preparation I have employed.

There are two organotherapeutic remedies which are antagonistic in this connection, or perhaps it is better to state that they are useful in opposite conditions, viz., agomensin and sistomensin. Both are ovarian extracts, the former being used for cases where hypofunction exists and the latter for the opposite condition of hyperfunction. I always have looked upon organotherapeutic remedies as possessing two properties which demand great care in use. The first of these is that their dosage and effects have to be most carefully watched or one will get results which are unwanted and sometimes unexpected. The second property is probably the more important and that is that, in my view, they are merely *activators* like many other drugs—in other words, they correspond very closely to what chemists term *catalysts*.

Now it is clearly of no use to activate any organ or group of cells in the human system unless the newly created or increased demands of that activated organ can be supplied from the current or reserve material in the system. To take a concrete example relating to the subject under present consideration—the calcium content of any cell or group of cells. Of what use is it to excite these cells to demand an increased supply of calcium if there is at the time not enough calcium to go all round ? If the one group of cells which is specially activated to attach calcium to itself succeeds in its claim, other cells may have to go short of it, and thus one may be merely " robbing Peter to pay Paul." I have discussed this aspect of the question with several confrères, and so far no one has been able to assist me out of the quandary.

The Pre-climacteric Period.—In many women a year or two before the onset of the climacterium one will find a condition suggestive of heart and kidney disease. This is now known to be due to increased arterial tension, and it needs a strong heart to contend against it. The symptoms are observable just before the occurrence of the flow and disappear or lessen on its establishment. They tend to increase in intensity as the actual climacterium approaches. The first symptom is dyspnœa, and a little later one will get dropsy and enlargement of the liver. So far as the heart is concerned one finds no murmur or *bruit* and no enlargement, though fairly often there is an accentuated second aortic sound or a want of tone in the first mitral sound. The pulse is slow, regular, small and high-tensioned. The urine is high-coloured and may contain a trace of albumen. The discomfort felt by the patient is out of all proportion to the condition.

In such cases I have found considerable benefit from the use of calcium given fairly freely.

The diet must be regulated, especially by the reduction of farinaceous substances, but fruits and vegetables may be freely taken. Nitrites are helpful, but are only very transient in their effects. Potassium iodide is useful in many cases. If calcium lactate be commenced on the earliest recognition of the condition, however, no other treatment will usually be needed.

Menorrhagia Occurring at the Menopause is usually very intractable and contributes very largely to the ill-health, both bodily and mental, of this period. One has tried ergotin, pituitary and mammary extracts, general tonics, and so on, sometimes with success and sometimes not. Kalzana, given in large doses at first (12 tablets per diem) and after a couple of days reduced to half the dose named, has only once disappointed me, and this was a patient in which I did not discover at first that the condition was complicated by myoma. Radium treatment was employed for this and the condition was completely cured.

At other periods of life menorrhagia is best treated by giving the drug three days before the expected flow and continuing it during the whole molimen. Doses of 6 tablets per diem are quite sufficient.

Dr. Hornung has recently shown that climacteric hæmorrhages can be controlled in the great majority of cases (80 per cent. to be exact) by the intravenous injection of 10 per cent. calcium chloride solution. The blood-platelets decrease markedly under this treatment and he records a corresponding "complete cessation or considerable diminution of the bleeding." (*Centralblatt fur Gynækologie*, 1923, No. 32). He

ascribes this blood change to ovarian dysfunction, but frankly admits that this may not explain the whole of the problem of climacteric hæmorrhages.

Anæmia—A Special Variety.—There is another condition of the climacteric which has not received the attention it deserves in text-books. This is a condition of anæmia which quite frequently causes one to suspect the pernicious variety. Blood counts will always, however, fortify one in putting aside this diagnosis. Calcium salts are, in my experience, always useful in this condition and they should always be tried for long periods. The condition is one in which dramatic results cannot be expected.

Acidosis.—The existence of this may usually be suspected in women who exhibit an unnatural desire for alkalies and who will consume carbonate of soda, lime water, etc., longingly. In such cases the craving for alkalies and the subsequent serious symptoms of the condition will invariably be averted if full doses of calcium are given. I usually tell such patients to take as much as they feel they want and always with good results.

Minor Digestive Disturbances.—In some women during pregnancy one will find that just because they suffer from minor digestive derangements, such as heartburn, acidity, vomiting, etc., they will leave off first one article of diet and then another, until they reduce themselves almost to the brink of starvation and induce an obstinate constipation. At one time my sheet-anchor in such cases was Sod. Bicarb., but it only gives relief for an hour or so, and when frequently repeated has a depressant effect. Since I discovered Kalzana I have relied entirely on this and find that it answers the

purpose admirably and is well borne and without any deleterious effect.

Chorea.—One very severe case of chorea deserves special mention. The woman was in a pitiable state ; she could not lie still for an instant, sleep was almost impossible, she was fed with great difficulty, had to lie on a mattress on the floor because of the danger of falling out of bed, and could not speak, whilst her general weakness was extreme. She was five months pregnant, and when I was called in to see her it was with the view of giving a second opinion on the need for terminating the pregnancy. She was then suffering from symptoms of acidosis with frequent vomiting. The first thing to be done was to wash out the stomach with sodium bicarbonate. Then colloidal calcium was administered intravenously as the symptoms were so urgent. Finally, Kalzana was prescribed—eight tablets per diem. A distinct change for the better was noted at the end of twenty-four hours, and the improvement was maintained until at the end of sixteen days she was able to get up. Four months later she was delivered of a large and healthy boy.

Dysmenorrhœa.—unless it be due to some development abnormally of the pelvic organs or to displacement or new growths—will usually be relieved by a course of calcium, which should be continued for some months.

Ante-partum Hæmorrhage.—I am sure that it is not generally realised that this is the cause of 15 per cent. of infantile deaths, but such is actually the case. I have verified the figure during a period of four years in my own practice. The only condition which excels it in mortality is syphilis. When it is due to accidental causes, of course, it is not usually

controllable. But there are many cases in which it can be controlled, and, in particular, those in which placental separation occurs owing to the condition of the blood. It is precisely in these cases that calcium is indicated from the very beginning of pregnancy. I have notes of one case in particular, where the woman had lost three children successively from this cause. On the occasion of the next pregnancy she was very depressed, having in mind the probability of still another abortion. I determined to try the effects of calcium and gave freshly prepared calcium lactate for a while, but it eventually caused nausea and dyspepsia. I then administered the drug, and found it to be well tolerated, even in fairly large doses. The result was the birth of a sturdy, full-time infant with no complications of any sort.

The early indications of a hæmorrhage occurring between the placenta and uterine wall remote from the circumference of the former are sudden pain, great pallor and blanching of the lips, coupled with nervous restlessness without active labour pains. Here the immediate intravenous administration of colloidal calcium, followed by large doses of Kalzana, will, in most cases, avert a catastrophe or premature delivery.

Chronic Ulceration.—I do not know whether others have had similar experiences, but I have had a small series of cases in which chronic ulcers—going on for from three to five years—have shown an unmistakable tendency to discharge blood or serum in greater amount than usual at the menstrual period. This may be, and probably is, an instance of "vicarious menstruation," for in most of them the catamenial discharge was less than usual. In one of these cases, where the ulceration had followed a compound fracture of the tibia and had healed and broken out again, off and on, for close on five

years, despite the most careful treatment, I stopped all local applications except boric powder and gave the patient Kalzana —three tablets per diem. At the end of a fortnight the ulcer had completely healed and a tough, though discoloured, skin had formed. This has now lasted for over two months and will bear quite rough handling. The catamenia is again normal. In other cases healing was not quite so rapid, but the curious thing in all of them is that with the healing of the ulcerated surface the menses have again become normal. The practical utility of a preparation which will thus "kill two birds with one stone" should be obvious to all.

Rickets.—Since reading the abstract of an article by Korenchevsky (*Brit. Med. Journ.*, 1922, ii, p. 1232), in which he strongly advocated the use of calcium and phosphates during pregnancy and lactation for the prevention of rickets, I have fed several mothers who had previously borne rachitic babies on the preparation named. In these days of housing shortage it was not possible to ensure the supply of the other requisites, such as an abundance of light and fresh air. But, in spite of this, the results have been most encouraging, and after a more extended trial of this preparation I hope to be able to refer further to this.